Claims

[c1] 1.A method for implementing a pre-designed state model, said method comprising:
extracting state information from the state model;
processing said extracted state information;
generating a state code and a state table in response to said processed extracted state information;
compiling said state code to generate a runtime code; and
implementing the state model by running said runtime code while referring to said state table.

[c2] 2.A method as in claim 1 wherein extracting state information from the state model comprises determining what events exist in the state model.

[c3] 3.A method as in claim 1 wherein extracting state information from the state model comprises determining what transitions exist between states within the state model.

[c4] 4.A method as in claim 1 further comprising:
generating an events symbols header in response to a header file; and
generating said state code in response to said processed extracted state information and said events symbols header.

[c5] 5.A method as in claim 4 wherein compiling said state code comprises compiling said state code in response to said events symbols header.

[c6] 6.A method as in claim 1 further comprising:
generating a events symbols header in response to an events configuration file; and
generating said state code in response to said processed extracted state information and said events symbols header.

[c7] 7.A method as in claim 1 further comprising annotating the state model with actions and conditions.

[c8] 8.A method for implementing a pre-designed plurality of state models for a

state machine having an event configuration file, said method comprising:
extracting state information from the plurality of state models;
generating an events symbols header from the event configuration file;
processing said extracted state information in response to said events symbols header;
generating a plurality of state codes and a plurality of state tables in response to said processed extracted state information;
compiling said plurality of state codes using said events symbols header to generate a plurality of runtime codes; and
implementing the state model by running said plurality of runtime codes while referring to said plurality of state tables.

[c9] 9.A method as in claim 8 wherein implementing a pre-designed plurality of state models comprises implementing a cooperating set of run-time controllers.

[c10] 10.A method as in claim 8 further comprising:
generating an events symbols header in response to a header file; and
generating said plurality of state codes in response to said processed extracted state information and said events symbols header.

[c11] 11.A state processor for generating a state table and a runtime code for use in implementing of one or more pre-designed state models, said device comprising:
a state model information provider extracting state model information in response to the one or more state models;
a state information separator generating a state code and the state table in response to the one or more state models; and
a compiler compiling said state code and generating the runtime code.

[c12] 12.A device as in claim 11 further comprising:
an event organizer generating an event symbols header in response to a header file; and
said compiler compiling said state code using said event symbols header.

[c13] 13.A device as in claim 12 wherein said event organizer generates an event

symbols header comprising a centralized list of all events for adding or renaming events.

[c14] 14.A device as in claim 12 wherein said event symbols header comprises global and shared event symbol definitions.

[c15] 15.A device as in claim 12 wherein said header file comprises global and shared event symbol definitions.

[c16] 16.A device as in claim 11 further comprising a runtime library.

[c17] 17.A device as in claim 16 wherein said runtime library comprises a generic state machine component for implementing of event handling.

[c18] 18.A device as in claim 16 wherein said runtime library comprises a time and memory efficient interpreter for processing and handling events.

[c19] 19.A device as in claim 16 wherein said runtime library comprises a scripted dynamic events processor for annotating the one or more state models.

[c20] A device as in claim 11 wherein said state processor generates a plurality of state tables and a plurality of state codes in response to the one or more state models.